

§ 25.206 Station identification.

The requirement for transmission of station identification is waived for all radio stations licensed under this part with the exception of satellite uplinks carrying broadband video information which are required to incorporate ATIS in accordance with the provisions set forth under § 25.308 of these rules.

[55 FR 21551, May 25, 1990]

§ 25.207 Cessation of emissions.

Space stations shall be made capable of ceasing radio emissions by the use of appropriate devices (battery life, timing devices, ground command, etc.) that will ensure definite cessation of emissions.

§ 25.208 Power flux density limits.

(a) In the band 3700–4200 MHz, the power flux density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values:

- 152 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;
- 152+($\delta-5$)/2 dB(W/m²) in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and
- 142 dB(W/m²) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

(b) In the bands 10.95–11.2 and 11.45–11.7 GHz, the power flux density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values:

- 150 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;
- 150+($\delta-5$)/2 dB(W/m²) in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and
- 140 dB(W/m²) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane

These limits relate to the power flux density which would be obtained under

assumed free-space propagation conditions.

(c) In the 17.7–19.7 GHz, 22.55–23.00 GHz, 23.00–23.55 GHz, and 24.45–24.75 GHz frequency bands, the power flux density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values:

- (1) 115 dB (W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane.
- (2) 115+0.5 (d-5) dB (W/m²) in any 1 MHz band for angles of arrival d (in degrees) between 5 and 25 degrees above the horizontal plane.
- (3) 105 dB (W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

[48 FR 40255, Sept. 6, 1983, as amended at 52 FR 45636, Dec. 1, 1987; 59 FR 53329, Oct. 21, 1994]

§ 25.209 Antenna performance standards.

(a) The gain of any antenna to be employed in transmission from an earth station in the fixed-satellite service shall lie below the envelope defined below:

(1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$$29-25 \log_{10} (\text{Theta}) \text{ dBi } 1^\circ \leq \text{Theta} \leq 7^\circ \\ +8 \text{ dBi } 7^\circ < \text{Theta} \leq 9.2^\circ$$

$$32-25 \log_{10} (\text{Theta}) \text{ dBi } 9.2^\circ < \text{Theta} \leq 48^\circ \\ -10 \text{ dBi } 48^\circ < \text{Theta} \leq 180^\circ$$

where Theta is the angle in degrees from the axis of the main lobe, and dBi refers to dB relative to an isotropic radiator. For the purposes of this section, the peak gain of an individual sidelobe may not exceed the envelope defined above for Theta between 1.0 and 7.0 degrees. For Theta greater than 7.0 degrees, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the gain envelope given above by more than 3 dB.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths: